

## **DRM Vendors**

### **Main DRM Vendors**

#### **RealNetworks**

Real Networks does not sell DRM technology as such. Their Media Commerce Suite for media servers includes DRM capabilities - notably content encryption and run-time license generation. On the desktop side, The "Media Commerce Upgrade" for RealPlayer (apparently already downloaded to millions of consumers) is a tamper-resistant playback environment that can obtain and enforce content licenses. Real's technology is very portable, supporting non-Windows platforms at both client and server. Whether this can overcome Microsoft's inherent advantages - building their media player into the O/S, and controlling security aspects of the O/S - remains to be seen. Some people think RealPlayer is in the same position Netscape Navigator was in the mid 1990s - a good technology that is destined to be clobbered by the Microsoft juggernaut. RealNetworks also has DRM capabilities for software - e.g. games as opposed to audio/video - incorporated into its "RealArcade" games service. In April 2003 Real Networks made an aggressive foray into the online music business by buying the Rhapsody music portal. This not only gives them leverage in terms of content acquisition, but also presumably will displace rival Microsoft's player in favor of their own RealPlayer.

**Products** - Helix DRM Packager, License Server, Client, Device Support, Universal Server Plug-ins, Media Commerce Suite

#### **Microsoft**

Through the dazzling growth of most of the last twenty years, Microsoft barely showed interest in Digital Rights Management. They showed concern about piracy, but they restricted their anti-piracy efforts to legal, educational and lobbying approaches, such as the Business Software Alliance. They did practically nothing - other than going after a few blatant, high-volume pirate operations - to actually stop people from copying their software, even though they were in a better position than anyone else to apply technology to do so.

Microsoft is becoming increasingly active in Digital Rights Management technology. Some of the contributing factors to this include:

- As a mature company in need of expanding markets, Microsoft wants to play in new spaces such as consumer electronics and wireless, and will never succeed there without DRM blessed by major content owners.
- Microsoft's dominance in its core markets is so complete that it can risk alienating some customers (e.g. by moving to widely disliked corporate licensing terms) in order to serve strategic objectives.
- Effective DRM technology may help control piracy in previously intractable markets such as China.
- Recently emerged near-universal Internet connectivity gives them the client-server links needed for security and control.
- They have entered the video game console market with their xBox, and in this market technical copy control is a firm requirement.

Microsoft is active in foundation technology for DRM (as exemplified by this patent for DRM at the O/S level). Microsoft is part owner of ContentGuard, a company created in conjunction with Xerox, which developed the XrML standard which Microsoft also promotes. Microsoft is also bringing a large body of Xerox-originated DRM patents into the Microsoft fold.

Today the most visible DRM from Microsoft is the media-protection technology in Windows Media Player. From a technology point of view, WMP and its DRM are quite capable, but whether they become dominant in the long run depends largely on factors such as an aversion by Hollywood to single-vendor technology, limited opportunities for branding inside their player, battles over licensing costs, and the security limits of current PCs - all of which limit the availability of "A" content necessary to generate significant revenue.

In early 2003, Microsoft announced Windows Rights Management Services (WRMS) , which for the first time is to support third party development of DRM-based applications.

Microsoft's potential to develop and deploy DRM technology is unmatched. For a small DRM technology developer to compete directly with Microsoft is foolish. In the long run, Microsoft may do with DRM what it did with Web browsers. Infant, they are already doing that already with Windows Media Player.

However, there are gaps in their strategy - for example, the lack of a PC game-oriented DRM technology. Further, they do not have a good reputation in the security community, and some of their DRM-related practices run the risk of alienating consumers. It will be some years before the platform technology necessary to support their announced strategies is widely deployed.

Microsoft DRM bears close watching, but for now, both content owners and DRM vendors should keep exploring third-party DRM technology as well.

### **Macrovision**

Macrovision is arguably the one company that generates real profits from the sale of Digital Rights Management technology - albeit that most of it to date is in Consumer Electronics markets, not the PC/Internet market. It is well known for its anti-copy technology for video. This technology is incorporated into a substantial fraction of the world's VCRs and generates an enviable licensing revenue stream. Macrovision has used this extra cash for a series of technology acquisitions, which expand the DRM markets available to them. This market has enormous potential given industry concern about loss of revenue due to large-scale CD copying on PC burners - but it also carries substantial risks in terms of user acceptance. Even if this market does not pan out, however, Macrovision is in a much better position than many other companies as it has many other sources of DRM related revenue. Macrovision also has one of the best collections of DRM related Patents in the world, many of them gained through acquisitions.

**Products** - MacroSAFE, SafeCast, SafeDisk, SafeWrap, CDS System (CDS-100, CDS-200, CDS-300)

### **IBM**

IBM is a huge company with a lot of security expertise but proportionately little presence in the DRM space. They have a music DRM offering, EMMS, which shows careful engineering for security. However EMMS is almost unknown in North America and, unlike Microsoft or Real, IBM has little motive to give this DRM capability away for free. It's not clear whether EMMS has a long-term future at IBM. They have abandoned similar technology before - such as Cryptolopes, which was discontinued in the late 1990s before ever seeing commercial use. IBM is also a perhaps premature booster of the TCGA (and more recently, TCG) standards for hardware/software additions that enhance PC security. Premature, because they are trying to sell laptops containing the technology before Microsoft's operating systems are able to leverage it.

**Products** - EMMS

### **InterTrust**

The early market leader in content protection, at least from a visibility standpoint, was InterTrust. Founded in 1990, InterTrust spent its first eight years developing its DRM technology and establishing relationships within the industry. It succeeded in making a name for itself and its DigiBox secure containers, and it has lined up an array of investors and partners in the process. Deployments of its e-commerce/DigiBox products began in 1999, though revenues were primarily from major stakeholders, including Mitsubishi, Reciprocal, Bertelsmann, NatWest and Computacenter. Some of the newer customers and partners include Nokia, Reuters and Universal Music Group. A DigiBox is a customizable cryptographic structure that supports files of any format, for example text, HTML, EXE, MPEG etc. InterTrust's encryption technology is general purpose and works with most media and content types, including music, publications, business information, video, games, software and images. The service secures the content and automates the e-commerce transaction that precipitates the delivery of the content to the consumer. Earlier, InterTrust offered DigiBoxes and DRM as a service through its partners called MetaTrust Utility agents. There was no standard toolkit - publishers worked with MetaTrust agents to create secure packages. Then, InterTrust introduced toolkits that enable content owners to create the packages themselves. Using InterTrust's

newest platform, Rights|System, the content owner first encrypts pieces of content using the Standard Packager or Streams Packager. Next, the usage rules are set and stored in secure files called RightsPacks. The encrypted content is stored on the retailer's distribution server and the RightsPacks are stored on the RightsServer. InterTrust's DRM solution cannot be used for streaming, which is a disadvantage considering the distribution of music and videos. For downloadable content, MusicMatch Jukebox is the most popular player that supports InterTrust's DRM system. Products - The RightsClient family consist of five

**Products** - RightsDesktop for PCs, RightsTV for set-top boxes, RightsPhone for mobile phones, RightsPD for portable music players and PDAs, and Rights|PDF plug-in.

## **Other DRM Vendors**

### **Vendors**

DivXNetworks

DMOD

DMDSecure

### **Product**

MPEG4 tools including DRM

DMOD WorkSpace

DMDfusion, DMDlicencer, DMDpackager, DMDaccess, DMDmobile